**OPERATION REQUIREMENT**

Version 0.4

11/19/2012

SOL Team

**REVISION HISTORY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Content** |
| 0.1 | 10/29/2012 | Anh Ton | Create Document. |
| Anh Ton | Define requirement and assign work. |
| Hieu Le | Describe function Manage Log In.  Describe function Manage Deal. |
| Khanh Duong | Describe Report.  Describe technical constraint. |
| Quang Nguyen | Describe quality attribute. |
| Anh Ton | Summary, review and rework document. |
| 0.2 | 11/09/2012 | Anh Ton | Define requirement and assign work. |
| Hieu Le | Describe functional requirement:   * Function Log In. * Function Log Out. * Function Change Password. * Function Register Account. |
| Dang Hoang | Describe functional requirement:   * Function View Deal. * Function Search Deal. * Function Order Deal. * Function Cancel Deal. |
| Khanh Duong | Describe functional requirement:   * Function View History. * Function Analyze Deal. * Function Send Mail.   Describe technical constraint. |
| Quang Nguyen | Describe quality attribute. |
| Anh Ton | Summary, review and rework document. |
| 0.3 | 11/13/2012 | SOL Team | Add Function Filter. |
| SOL Team | Review and rework document |
| 0.4 | 11/19/2012 | Anh Ton | Add functions:   * View Consumer Profile. * Edit Consumer Profile. * Retrieve Password. * Change Language.   Edit functions:   * Log In. * Log Out. * Register Account. * Order Deal.   Delete functions:   * Search deal. * Change Password. |

**TEAM MEMBER LIST**

|  |  |
| --- | --- |
| **Student ID** | **Name** |
| T095756 | Anh Ton |
| T095251 | Dang Hoang |
| T095095 | HanhLuong (Project manager) |
| T093798 | Hieu Le |
| T091900 | Khanh Duong |
| T094193 | Quang Nguyen |

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# INTRODUCE

## Purpose

This document will be used to record, communicate and refine the operation requirement for the project. This document will act as the main repository of requirements during the project.

## Intended Audience and Reading Suggestions

The intended audience for this document is the SOL team and the customer. These stakeholders are to review the document.

## Definitions, Acronyms and Abbreviations

|  |  |  |
| --- | --- | --- |
| **No.** | **Glossary** | **Description** |
| 1 | SOL | Shopping Online. |
| 2 | FR | Functional Requirement. |
| 3 | AD | Architecture & Design. |
| 4 | QAU | Quality Attribute Usability. |
| 5 | QAS | Quality Attribute Security. |
| 6 | QAP | Quality Attribute Performance. |
| 7 | QAA | Quality Attribute Availability. |
| 8 | QAM | Quality Attribute Modifiability. |

## References

|  |  |  |
| --- | --- | --- |
| **No** | **Document** | **Description** |
| 1 | Architecting.Software.Intensive.Systems.A.Practitioners.Guide.Nov.2008. | Using for create document outline. |
| 2 | Documenting Software Architectures - View and Beyond, Paul Clements, 2010 (Clements 10). | Applying to describe Views. |
| 3 | Software Architecture in Practice. | Applying to describe Views. |

# FUNCTION REQUIREMENTS LIST:

|  |  |
| --- | --- |
| **ID** | **Function Requirement** |
| FR01 | Log In. |
| FR02 | Log Out. |
| FR03 | Register Account. |
| FR04 | Retrieve Password. |
| FR05 | View Consumer Profile. |
| FR06 | Edit Consumer Profile. |
| FR07 | View Deal. |
| FR08 | Filter Deal. |
| FR09 | Order Deal. |
| FR10 | Edit Ordered Deal. |
| FR11 | View Ordered Deal History. |
| FR12 | Analyze Deal. |
| FR13 | Send Mail. |
| FR14 | Change Language. |

# FUNCTION DESCRIPTION:

## Function Log In

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Log In | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR01** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | This function helps consumer log in the system to order deals, cancel deal, view history, view and edit consumer information. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer fills out the information to log in system. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer information. | |
| **Describe the operational context.** | Consumer access to the homepage, consumer fill out information to login. | |
| **Describe how the system/product should respond.** | - The system will find & validate information of account.  *Case 1:* Consumer log in successful.  - The system will log in the system within 3s.  *Case 2:* Consumer log in failure.  - The system show error message within 3s. | |
| **Describe any output the system/product produces as a result of the action.** | *Case 1:* Consumer log in successful.  - Back to previous page if they are on order deal page in previous step, otherwise back to favorite page.  *Case 2:* Consumer log in failure.  - Error message on login page. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer will used output of case 1 to implement the allowed functions: order deals, cancel deal, view history, change password, view and edit consumer information.  - The system uses output of case 2 to prevent consumer uses to function that the system doesn’t allowed. | |

## Function Log Out

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Log Out | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR02** |
| **Operational Consideration** | Stakeholder Response. | |
| **Provide a general description of the functionality.** | This function kill and release all resource is hold by current session. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer click log out button. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer account (Consumer name and operation status). | |
| **Describe the operational context.** | After consumer log in system successful then click log out button when they want to exit the system. System exit their account and comeback to homepage. | |
| **Describe how the system/product should respond.** | System will kill and release all resource be hold by current session after 3s. | |
| **Describe any output the system/ product produces as a result of the action.** | Home page. | |
| **Describe who or what uses the output and what is the output used for.** | The system will uses output and only allow consumer log in, view, filter deals. | |

## Function Register Account

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Register account | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR03** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer can create account and use that account to used functions that the system allows (log in, view and edit consumer profile, order deal, cancel or edit ordered deal, view history). | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer registers account. | |
| **Describe any input that is provided or is available at the time of initiation.** | Required information (Consumer ID, password, email, full name, address, phone number, Birthday). | |
| **Describe the operational context.** | Consumer access to homepage and click register button. System display interface register account. In interface register account, system display required information’s consumer, then they fill out information and click create button. | |
| **Describe how the system/product should respond.** | *Case 1:* Account information is correct.  - The system validates account information.  - The system will create new account and back to homepage.  - The system sends mail to both administrator and consumer.  *Case 2:* Account information is incorrect.  - The system validates account information.  - The system show error message. | |
| **Describe any output the system/product produces as a result of the action.** | *Case 1:* Account information is correct.  - New account.  - Email.  *Case 2:* Account information is incorrect.  - Error message. | |
| **Describe who or what uses the output and what is the output used for.** | Consumer will use output and use allowed functions (log in, view and edit consumer profile, order deal, cancel deal, view history). | |

## Function Retrieve Password

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Retrieve password | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR04** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | This function helps consumer take a new password when they forget their password. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer only fills out the username and their register email. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer must have an account ago (Consumer ID, email). | |
| **Describe the operational context.** | Consumer access to the homepage, click forget password hyperlink to take a new password, and consumer fill out information (consumer ID, email) to take a new password. | |
| **Describe how the system/product should respond.** | - The system will find & validate mail of account. The system will back homepage within 3s and send mail for consumer with new password. | |
| **Describe any output the system/product produces as a result of the action.** | - New password.  - Consumer will receive a link confirm to define new password in their mail register. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer will used output to log in the system in the next times. | |

## Function View Consumer Profile

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  View consumer profile | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer, Administrator | | **ID : FR05** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer can view their detail profile. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer click choose their name in current page. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer profile (Consumer ID, password, email, full name, address, phone number, Birthday, city name, district name, avatar). | |
| **Describe the operational context.** | Consumer log in the system successful, consumer clicks on their name in current page to view detail profile. | |
| **Describe how the system/product should respond.** | The system shows consumer profile (Consumer ID, email, full name, address, phone number, Birthday, city name, district name, and avatar). | |
| **Describe any output the system/product produces as a result of the action.** | Consumer detail profile page is showed. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer will use output to view or edit their profile.  - Administrator will use output to define address of consumer when delivery. | |

## Function Edit Consumer Profile

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Edit consumer profile | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer, Administrator | | **ID : FR06** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer can edit their detail profile. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer chooses view profile and then edit. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer profile (Consumer ID, password current, new password, email, full name, address, phone number, Birthday). | |
| **Describe the operational context.** | Consumer log in system successful, consumer clicks on their name in current page to view detail profile and then edit information. | |
| **Describe how the system/product should respond.** | The system will validate profile and update consumer’s profile after 3s. | |
| **Describe any output the system/ product produces as a result of the action.** | The consumer profile has been changed. | |
| **Describe who or what uses the output and what is the output used for.** | - Administrator will use output to define address (if has edit) of consumer when delivery.  - Consumer will use output to increase security for them (if has change password).  - Consumer will use output to log in later (if has change password). | |

## Function View Deal

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  View deal | | |
| Describe stakeholder(s) role(s) proposing the description:  Consumer | | **ID : FR07** |
| Operational Consideration | Stakeholder Response | |
| Provide a general description of the functionality. | Consumer can view all deals existed in the system and view detail deal. | |
| Describe what the stakeholder does now or would like to be able to do. | Consumer can choose view deals follow category or click choose a deal to view detail. | |
| Describe any input that is provided or is available at the time of initiation. | Deal information. | |
| Describe the operational context. | Consumer access to the homepage then they can viewall selling dealin the system. If they want to view detail deal, they click detail deal button to view details deal which is chosen. | |
| Describe how the system/product should respond. | *Case 1:* View all selling deal.  - The system shows all selling deal after 3s.  *Case 2:* View detail deal.  - The system shows detail information of a deal after 3s. | |
| Describe any output the system/product produces as a result of the action. | *Case 1:* View all selling deal.  - Deals list.  *Case 2:* View detail deal.  - Deal information detail. | |
| Describe who or what uses the output and what is the output used for. | - Consumer will uses output to decision choose buy deals.  - The system uses output to analyze demand of consumer (if consumer has log in the system). | |

## Function Filter

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Filter | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR08** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer can filter by city and category deals. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer choose filter city and deal category name. | |
| **Describe any input that is provided or is available at the time of initiation.** | City and deal category name. | |
| **Describe the operational context.** | Consumer access to the homepage, then they choose to view deal by filter city or category name. | |
| **Describe how the system/product should respond.** | The system filter deals by city or deal category name that consumer chose after 3s. | |
| **Describe any output the system/product produces as a result of the action.** | Deal list. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer will use output to make decision to buy deals.  - The system uses output to analyze demand of consumer (if consumer has log in the system). | |

## Function Order Deal

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Order Deal | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer, Administrator | | **ID : FR09** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer can order deals. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer view and order deal. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer and deal information. | |
| **Describe the operational context.** | *Case 1:* Consumer logged in  - Consumer views detail a deal, chooses order deal button and enters: number of deal that wants to order.  *Case 2:* Consumer doesn’t log in.  -Consumer views detail a deal and choose order deal button.  - The system shows login form.  - Consumer enters account information to log in, then automatic back to order page, and enters: number of deal that wants to order. | |
| **Describe how the system/product should respond.** | - The system minus number of deals sold after send mail for consumer.  - The system updates information order deal of consumer after 3s.  - The system sends mail for consumer to confirm after 3s. | |
| **Describe any output the system/product produces as a result of the action.** | - Deal will be update in cart information.  - Email confirmed.  - Number of deal is updated. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer uses output to know deals ordered.  - Administrator uses output to know deals that consumer ordered and then delivery. | |

## Function Edit Ordered Deal

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Edit ordered deal | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR10** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer can edit number or cancel deal from their cart. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer accesses into system to view ordered deal history of ordered deals and edit number or cancel deals. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer ordered deals. | |
| **Describe the operational context.** | Consumer log in system successful and choose view ordered deal history, then they click edit number or cancel deal. | |
| **Describe how the system/product should respond.** | *Case 1:* In allow time.  - If consumer chose cancel deal, the system will cancels deal from consumer’s cart after 3s.  - If consumer edits number of deal, the system will update number ordered deals after 3s.  *Case 2:* In not allow time.  - Not show function edits number and cancels deal. | |
| **Describe any output the system/product produces as a result of the action.** | *Case 1:* In allow time.  - If consumer chose cancel deal, deal chose will change status from consumer’s cart.  - If consumer edits number of deal, deal chose to edit will change number from consumer’s cart. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer used output to know deals that consumer ordered.  - Administrator uses output to know deals that consumer ordered and then delivery. | |

## Function View History

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  View ordered deal history | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR11** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | The system will display the number of deals that the consumer has previously ordered, so that, consumer can edit number or cancel deal in allow time. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer views history of ordered deals. | |
| **Describe any input that is provided or is available at the time of initiation.** | Consumer’s ordered deals. | |
| **Describe the operational context.** | Consumer log in system successful and choose view ordered deal history. | |
| **Describe how the system/product should respond.** | The system get from database all deals that consumer has previously ordered. | |
| **Describe any output the system/product produces as a result of the action.** | The system show all deals that the consumer has previously ordered. | |
| **Describe who or what uses the output and what is the output used for.** | - Consumer uses output to view deals that they have previously ordered.  - The system uses output to analyze deals the consumer usually orders. | |

## Function Analyze Deal

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Analyze deal | | |
| **Describe stakeholder(s) role(s) proposing the description:**  The system | | **ID : FR12** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | - Statistics what consumers view, buy deal from the category and city.  - After consumers login, the system will show concern deals in favorite page. | |
| **Describe what the stakeholder does now or would like to be able to do.** | The systems analyze data.  Consumer view concern deals on main page and e-mail. | |
| **Describe any input that is provided or is available at the time of initiation.** | History of consumer’s ordered deals and viewed deals (Consumer logged in) | |
| **Describe the operational context.** | - Everyday (1:00 am), the system statistics what consumers view, buy deal from the category and city. | |
| **Describe how the system/product should respond.** | - The system will analyze deals that consumer concern. | |
| **Describe any output the system/product produces as a result of the action.** | - Concern deals list. | |
| **Describe who or what uses the output and what is the output used for.** | - The system will use output send mail to consumer.  - The system uses output to show deal on favorite page. | |

## Function Send Mail

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Send mail | | |
| **Describe stakeholder(s) role(s) proposing the description:**  The system | | **ID : FR13** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | - When consumer orders deal the system will send mail to consumer.  - Send mail to consumer to notice about successfully registration. | |
| **Describe what the stakeholder does now or would like to be able to do.** | The system sends mail to consumers. | |
| **Describe any input that is provided or is available at the time of initiation.** | - Ordered deal and consumer information.  - Registration information. | |
| **Describe the operational context.** | *Case 1:* Consumer log into the system and order deal. Systems automatically send the email when consumer orders deal successful.  *Case 2:* Consumer accesses into system and register account, after fill out information. Systems automatically send the email when Consumer registers account successfully. | |
| **Describe how the system/product should respond.** | The system will automatically send e-mail for consumer. | |
| **Describe any output the system/product produces as a result of the action.** | *Case 1:* Email about ordered deals.  *Case 2:* Email about registration. | |
| **Describe who or what uses the output and what is the output used for.** | *Case 1:* Consumer will use output to view ordered deal.  *Case 2:* Consumer will use output to confirmed registration. | |

## Function Change Language

|  |  |  |
| --- | --- | --- |
| **Operational description title:**  Change Language | | |
| **Describe stakeholder(s) role(s) proposing the description:**  Consumer | | **ID : FR14** |
| **Operational Consideration** | Stakeholder Response | |
| **Provide a general description of the functionality.** | Consumer change language on web page. | |
| **Describe what the stakeholder does now or would like to be able to do.** | Consumer access to the system and change language to use. | |
| **Describe any input that is provided or is available at the time of initiation.** | The system has two languages: Vietnamese and English. | |
| **Describe the operational context.** | Consumer access to web page and choose language to use (Vietnamese or English). | |
| **Describe how the system/product should respond.** | The system will change language of web page follow consumer’s chose. | |
| **Describe any output the system/product produces as a result of the action.** | Web page contain is language that consumer’s chose. | |
| **Describe who or what uses the output and what is the output used for.** | Consumer will use output to view website easier. | |

# QUALITY ATTRIBUTE CHARACTERIZATION

## Usability Characterization

|  |  |
| --- | --- |
| **Stakeholder: Consumer** | **ID: QAU** |
| **Quality Attribute: Usability** | |
| **Reasonable for quality attribute:** make usability interface to easily use as well as reduce time to use features. | |
| **Stakeholder’s quality attribute story**   1. Consumers can order deal without login or register first because the system will ask consumer later. 2. Consumer can order deal only with 2 steps after login 3. Consumer can view deal information with new language on webpage. 4. Consumer can login any time to view Homepage/Favorite page/Order deal page 5. Consumer can use the program without user guide. 6. The system must have name for each textbox on the interface to let consumer know what they can do. 7. The system must show tool tip for button/link on the interface to let consumer can use it right. | |
| **Other issues and concerns:** None | |

## Security Characterization

|  |  |
| --- | --- |
| **Stakeholder: Consumer** | **ID: QAS** |
| **Quality Attribute: Security** | |
| **Reasonable for quality attribute:** System error or system information are not presented on the screen | |
| **Stakeholder’s quality attribute story**   1. The system must not show system error and has to present what exactly that error is by warning message on the screen. 2. Consumer’s password must be one way encrypted (MD5). 3. The system will show CAPTCHA code if they login fail 5 time in 30 minutes on web. | |
| **Other issues and concerns:** None | |

## Performance Characterization

|  |  |
| --- | --- |
| **Stakeholder: Consumer** | **ID: QAP** |
| **Quality Attribute: Performance** | |
| **Reasonable for quality attribute:** Speed need not too fast and to slow. | |
| **Stakeholder’s quality attribute story**   1. Time to show deals list (about 15 deals/page, 7 highlight deal info: deal name, images, % discount, root price, sell price, remain time, number of ordered deal) on home page/favorite page /by city or deal category with 500 hits at once time: the fastest time is 3s and the slowest time is 8s. 2. Time to log in successfully for 500 hits at once time, the fastest time is 3s and the slowest time is 8s. 3. Time to operate on deal (Order deal, Cancel deal, Edit number of ordered deal) successfully. With 500 hits at once time, the fastest time is 3s and the slowest time is 8s. | |
| **Other issues and concerns:** None | |

## Availability Characterization

|  |  |
| --- | --- |
| **Stakeholder: Consumer** | **ID: QAA** |
| **Quality Attribute: Availability** | |
| **Reasonable for quality attribute:** The system can operate 24/24 | |
| **Stakeholder’s quality attribute story**   * Consumer can access to the system to use allow function any time. With 500 hits at once time, the fastest time is 3s and the slowest time is 8s. | |
| Other issues and concerns: None | |

## Modifiability Characterization

|  |  |
| --- | --- |
| **Stakeholder: Consumer** | **ID: QAM** |
| **Quality Attribute: Scalability** | |
| **Reasonable for quality attribute:** Expand competitive market | |
| **Stakeholder’s quality attribute story**   1. Consumer may pay online after order deal. 2. The application can run on iOS. | |
| **Other issues and concerns:** None | |

# CONSTRAINTS

## Business Constraints

|  |  |
| --- | --- |
| **Consider** | **Business Constraints** |
| **Schedule limitations** | Time of market is 30 week. |
| **Mandatory regulatory restrictions and demands** | Human resource: 6 members. |

## Technical Constraints

|  |  |
| --- | --- |
| **Consider** | **Technical Constraints** |
| Computer operating system. | Server use Linux, Window 7, Android, Browser web Google chrome 23-25, Firefox 14-16, IE 9-11, android 2.0. |
| Computer platforms. | Java. |
| Computer languages. | Java, Java Script, CSS, HTML 5. |
| Tools and methods. | Environment: Eclipse, My SQL. |
| Protocols, interfaces, standard. | J2EE, JDBC, myBatis. |

# GLOSSARY